Class Tasks A4
Structure Testing
Scenario 1
Requirements

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Class Task 4 - Structure Testing

- You have been given a partially completed database called “EB Garage Database FOR TESTING”.
- You have been given a range of database structure tests to carry out.
- Complete the supplied test plan for each test.
- Document your results thoroughly.
- Discuss your findings with the group.
- **Time Allowed:** 25 minutes.

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Scenario 1 - The East Berkshire Garage

You are designing a database for the East Berkshire Garage Company. The company data stores a list of vehicles, the date the vehicle has gone in for repair as well as some details about the customer.

- Each vehicle must be manufactured before 2020.
- Each vehicle can only have a fuel type of Petrol, Diesel or Hybrid.
- The repair date must be before 2021.
- The customer phone number follows an identical 8-digit format with no gaps.
- The repair cost is the cost of an individual vehicle repair, specific for the customer, vehicle and date.

You should now have your database relationships designed and it is now time to add Data Validation rules.

Your table structures must use suitable validation rules to meet the following requirements.

- A Customer Phone Number must be present.
- A Customer Last Name must be present.
- A Customer Phone Number must be exactly 8 digits long.
- The Vehicle Fuel Type can only be Diesel, Hybrid or Petrol.
- The Vehicle Fuel Type must be present.
- A Vehicle can only use an existing Fuel Type.
- A Vehicle Make can only be either VW, BMW or Audi.
- The Vehicle Make must be present.
- The Vehicle Model must be present.
- The Vehicle Year made must be after 2016.
- The Vehicle Year made must start with ‘20’.
- The Vehicle Model can only have a maximum number of 4 letters.
- The Repair Date must be between 01/02/2020 and 04/04/2020.
- The Repair Date must follow the Day/Month/Year Format.
- The Repair Date end must be on or after the repair date.
- The Repair Cost must be less than 3000.
- The Repair Cost must be present.
- The Repair must be for an existing Customer.
- The Repair must be for an existing Vehicle.

If you do not have a completed EB Garage Database, one has been provided for you.

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You will test the structure and the validation of your relational database using suitable test data

(normal, erroneous and extreme as appropriate).

You must provide evidence of table level testing that proves:

1. a record will not be saved if the phone number is less than digits long.
2. a record will not be saved if the customer name is missing.
3. a record will not be saved if the name of the fuel type is missing.
4. a record will not be saved if repair date is not between 01/02/2020 and 04/04/2020.
5. a record will not save if the repair does not have a valid customerID.
6. a record will not save if a vehicle model is over 4 characters long.
7. a record will not be saved if the year made does not start with a 20.

Complete the attached test log to show how you have tested the structure and validation of your

database.

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